CONTENTS

Part 1 (January 1991)

Dunstan S. C. Spencer: Institutionalizing the Farming Systems Perspective in Multi-commodity Research Institutes: The Role of Systems-based Research Groups (Farming Systems Series – Number 27) 1

R. J. Summerfield, E. H. Roberts, R. H. Ellis and R. J. Lawn: Towards the Reliable Prediction of Time to Flowering in Six Annual Crops. I. The Development of Simple Models for Fluctuating Field Environments 11

G. O. Iremiren, A. W. Osara and D. A. Okiy: Effects of Age of Harvesting after Pod Set on the Growth, Yield and Quality of Okra (*Abelmoschus esculentus*) 33

J. V. Wilkins: The Search for a Viable Alternative to Slash and Burn Agriculture in the Lowland Plains of Bolivia 39

H. E. Nyirenda: Use of Growth Measurements and Foliar Nutrient Content as Criteria for Clonal Selection in Tea (*Camellia sinensis*) 47

D. J. Rees, M. Islam, A. Samiullah, Fahema Rehman, S. H. Raza, Z. Qureshi and S. Mehmood: Rain-fed Crop Production Systems of Upland Balochistan: Wheat (*Triticum aestivum*), Barley (*Hordeum vulgare*) and Forage Legumes (*Vicia* species) 53

H. M. Ishag and O. A. A. Ageeb: The Physiology of Grain Yield in Wheat in an Irrigated Tropical Environment 71

M. D. Reddy, A. R. Sharma and M. M. Panda: Effect of Mixed Row Cropping of Early and Late Maturing Rice Varieties on Crop Productivity under Intermediate Deepwater Conditions 79

Book Reviews 87

Notes for Contributors 91

Part 2 (April 1991)

Derek Byerlee, Bernard Triomphe and Michel Sébillotte: Integrating Agronomic and Economic Perspectives into the Diagnostic Stage of On-farm Research (Farming Systems Series – Number 28) 95

Allan Low and S. R. Waddington: Farming Systems Adaptive Research: Achievements and Prospects in Southern Africa (Farming Systems Series – Number 29) 115

S. Fukai, L. Li, P. T. Vizmonte and K. S. Fischer: Control of Grain Yield by Sink Capacity and Assimilate Supply in Various Rice (*Oryza sativa*) Cultivars 127

N'guettia R. Yao, Kabrah Yeboua and Angbonou Kafrouma: Effect of Intensity and Timing of Defoliation on Growth, Yield Components and Grain Yield in Maize 137

S. N. Silim, M. C. Saxena and W. Erskine: Effect of Sowing Date on the Growth and Yield of Lentil in a Rainfed Mediterranean Environment 145

R. Shorter, R. J. Lawn and G. L. Hammer: Improving Genotypic Adaptation in Crops – a Role for Breeders, Physiologists and Modellers 155

William Stephens and M. K. V. Carr: Responses of Tea (*Camellia sinensis*) to Irrigation and Fertilizer. I. Yield 177

William Stephens and M. K. V. Carr: Responses of Tea (*Camellia sinensis*) to Irrigation and Fertilizer. II. Water Use 193

Suzanne C. Nelson, Gary P. Nabhan and Robert H. Robichaux: Effects of Water, Nitrogen and Competition on Growth, Yield and Yield Components of Field-grown Tepary Bean 211

J. M. Ngeve and J. C. Bouwkamp: Effects of Sweet Potato Virus Disease (SPVD) on the Yield of Sweet Potato Genotypes in Cameroon 221

Book Reviews 227

Part 3 (July 1991)

Joshua L. Posner and Eric W. Crawford: An Agro-economic Analysis of Field Trials from a Farming Systems Research Perspective: Weed Control in Rainfed Lowland Rice in Senegal (Farming Systems Series – Number 30) 231

Frans Doorman: Identifying Target Groups for Agricultural Research: The Categorization of Rice Farmers in the Dominican Republic (Farming Systems Series – Number 31) 243

Sam Fujisaka: Improving Productivity of an Upland Rice and Maize System: Farmer Cropping Choices or Researcher Cropping Pattern Trapezoids? (Farming Systems Series – Number 32) 253

Robert B. Kagbo: A Comparison of Natural Rock Phosphate with Imported Cotton Fertilizer in Cotton/Cereal Rotations in Mali 263

J. P. Wright, J. L. Posner and J. D. Doll: The Effect of Tied Ridge Cultivation on the Yield of Maize and a Maize/Cowpea Relay in the Gambia 269

R. L. Yadav, Ravi Kumar and R. S. Verma: Effect of Planting Technique and Planting Density on Yield of Late Planted Sugarcane in North Central India 281

Charles Staver: The Role of Weeds in the Productivity of Amazonian Bush Fallow Agriculture 287

D. J. Midmore and J. Alcazar: Mixed Planting of Potato Cultivars: Growth, Yield and Leafminer Damage in the Cool Tropics 305

A. E. Elshafie and A. A. Elhussein: An Evaluation of *Rhizobium* Survival in Two Carriers New to Sudan 319

R. R. Weil and G. S. Belmont: Dry Matter and Nitrogen Accumulation and Partitioning in Field Grown Winged Bean 323

R. R. Weil and A. Samarnayake: Effects of Winged Bean on a Following Maize Crop 329

Book Reviews 339

Part 4 (October 1991)

D. M. Merrill-Sands, S. D. Biggs, R. J. Bingen, P. T. Ewell, J. L. McAllister and S. V. Poats: Institutional Considerations in Strengthening On-farm Client-oriented Research in National Agricultural Research Systems: Lessons from a Nine-country Study (Farming Systems Series – Number 33) 343

Asfaw Negassa, Benti Tolessa, Steven Franzel, Gemechu Gedeno and Legesse Dadi: The Introduction of an Early Maturing Maize (*Zea mays*) Variety to a Mid-altitude Farming System in Ethiopia 375

J. Kahurananga: Intercropping Ethiopian *Trifolium* Species with Wheat 385

H. M. Abdel Magid, M. F. Ghoneim, R. K. Rabie and R. E. Sabrah: Productivity of Wheat and Alfalfa under Intercropping 391

I. A. M. Yunusa and N. A. Gworgwor: Growth and Yield of Maize Genotypes during Dry Seasons in Northern Nigeria 397

T. I. Ofuya: Observations on Insect Infestation and Damage in Cowpea (*Vigna unguiculata*) Intercropped with Tomato (*Lycopersicon esculentum*) in a Rain Forest Area of Nigeria 407

P. H. Le Mare: Rock Phosphates in Agriculture 413

R. K. Mahey, Rajwant Singh, S. S. Sidhu and R. S. Narang: The Use of Remote Sensing to Assess the Effects of Water Stress on Wheat 423

S. Kurien, A. M. Goswami and D. L. Deb: The Distribution of Root Activity in Acid Lime (*Citrus aurantifolia*) 431

P. E. Odo: Evaluation of Short and Tall Sorghum Varieties in Mixtures with Cowpea in the Sudan Savanna of Nigeria: Land Equivalent Ratio, Grain Yield and System Productivity Index 435

Book Reviews 443

Index 449